

## **Repeated Radial Approach: Who and in Whom**

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### **Background:**

The transradial approach (TRA) for coronary angiography and angioplasty has been shown to increase patient comfort and reduce bleeding complications as well as reduce mortality in some patient subgroups. Beyond the initial procedure however, due to its small caliber, radial artery occlusion and stenosis have limited the reuse of this vessel as an access site. We assessed the factors influencing performance of a second procedure from the TRA.

### **Methods:**

A prospective clinical database is maintained of all catheterizations performed in our center. Over the past 12 years there has been a steady rise in TRA procedures reaching 10% in 2007 and 50% in 2012.

Three operators (D.M.; J.B.;M.K.) adopted TRA as their default approach and were regarded as “radialists”. A retrospective analysis of repeat procedures performed after 2006 following an index transradial procedure for clinical factors and operator preference was undertaken.

### **Results:**

Between 2000 and 10/2012, 3457 TRA of 19362 total catheterization procedures (17.9%) were performed. Of these, 405(11.7%) patients underwent a second procedure after 2006, 220 (54.3%) from the TRA. In 81 patients multiple repeat procedures were performed (2-5). Factors that reduced the likelihood of a second TRA procedure included failed PCI in the index procedure, previous CABG, chronic renal failure, and not having a radialist as the operator for the repeat procedure. At multivariate analysis, previous CABG (OR 0.29, 95%CI 0.14-0.58, p=0.001) and having a radialist operator (OR 7.18, 95%CI 4.39-11.74, p0.0001) were all found to influence the reuse of the TRA.

### **Conclusions:**

In an environment of increasing TRA, excluding specific clinical scenarios such as failed previous PCI and the presence of a LIMA, repeat TRA for second procedures appear to be related predominantly to the operators preference and dedication to the approach.